

# Central<sup>TM</sup> Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA  
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Manufacturers of World Class Discrete Semiconductors

2N6477

2N6478

NPN SILICON  
POWER TRANSISTOR

JEDEC TO-220 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6477 and 2N6478 types are Epitaxial-Base Silicon Power Transistors designed high voltage amplifier applications.

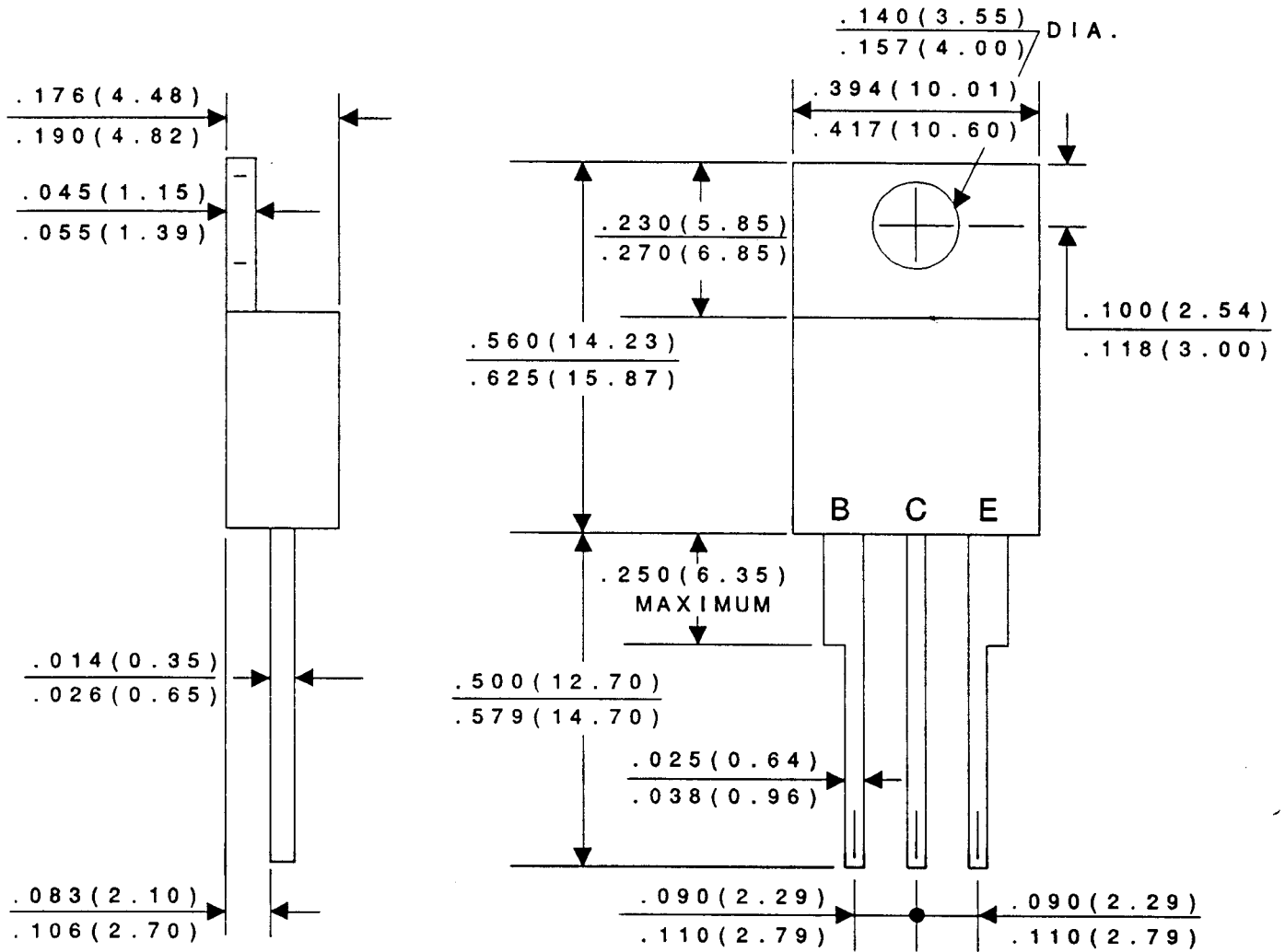
## MAXIMUM RATINGS (T<sub>C</sub> = 25°C)

	SYMBOL	2N6477	2N6478	UNITS
Collector-Base Voltage	V <sub>CBO</sub>	140	160	V
Collector-Emitter Voltage	V <sub>CEV</sub>	140	160	V
Collector-Emitter Voltage	V <sub>CEO</sub>	130	150	V
Collector-Emitter Voltage	V <sub>CER</sub>	120	140	V
Emitter-Base Voltage	V <sub>EBO</sub>	5.0		V
Collector Current	I <sub>C</sub>	2.5		A
Peak Collector Current	I <sub>CM</sub>	4.0		A
Base Current	I <sub>B</sub>	1.0		A
Power Dissipation	P <sub>D</sub>	50		W
Operating and Storage				
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150		°C
Thermal Resistance	θ <sub>JC</sub>	2.5		°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N6477		2N6478		UNITS
		MIN	MAX	MIN	MAX	
I <sub>CEV</sub>	V <sub>CE</sub> = 130V, V <sub>BE(off)</sub> = 1.5V		2.0			mA
I <sub>CEV</sub>	V <sub>CE</sub> = 150V, V <sub>BE(off)</sub> = 1.5V			2.0		mA
I <sub>CEV</sub>	V <sub>CE</sub> = 120V, V <sub>BE(off)</sub> = 1.5V, T <sub>C</sub> = 150°C		10			mA
I <sub>CEV</sub>	V <sub>CE</sub> = 140V, V <sub>BE(off)</sub> = 1.5V, T <sub>C</sub> = 150°C			10		mA
I <sub>CEO</sub>	V <sub>CE</sub> = 80V		2.0			mA
I <sub>CEO</sub>	V <sub>CE</sub> = 100V			2.0		mA
I <sub>EBO</sub>	V <sub>BE</sub> = 5.0V		2.0	2.0		mA
BV <sub>CEV</sub>	I <sub>C</sub> = 100mA, V <sub>BE</sub> = 1.5V	140		160		V
BV <sub>CER</sub>	I <sub>C</sub> = 100mA, R <sub>BE</sub> = 100Ω	130		150		V
BV <sub>CEO</sub>	I <sub>C</sub> = 100mA	120		140		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> = 1.0A, I <sub>B</sub> = 100mA		1.0		1.0	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> = 2.5A, I <sub>B</sub> = 500mA		2.0		2.0	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> = 4.0V, I <sub>C</sub> = 1.0A		1.8		1.8	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> = 4.0V, I <sub>C</sub> = 2.5A		3.0		3.0	V
h <sub>FE</sub>	V <sub>CE</sub> = 4.0V, I <sub>C</sub> = 1.0A	25	150	25	150	
h <sub>FE</sub>	V <sub>CE</sub> = 4.0V, I <sub>C</sub> = 2.5A	5.0		5.0		
h <sub>fe</sub>	V <sub>CE</sub> = 4.0V, I <sub>C</sub> = 500mA, f = 40kHz	5.0		5.0		
f <sub>T</sub>	V <sub>CE</sub> = 4.0V, I <sub>C</sub> = 500mA	200		200		kHz
h <sub>fe</sub>	V <sub>CE</sub> = 4.0V, I <sub>C</sub> = 100mA, f = 1.0kHz	25		25		

# JEDEC TO-220 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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